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A WINTER HAZARD FOR THE OLD

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accidental hypothermia

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A Winter Hazard for the Old:

Accidental Hypothermia

Winter is a time of many illnesses and injuries. Cold, icy weather can bring about heart attacks, frostbite, and asthma, as well as broken bones due to falls. While staying a long time in a cold place can harm anyone, it is particularly risky for the old. Even mildly cool temperatures of 60°F (15.5°C) to 65°F (18.3°C) can trigger accidental hypothermia (hi-po-ther-mee-uh), a drop in deep body temperature that can be deadly if not detected promptly and treated properly. Some diseases and certain drugs can make a person more likely to have this condition.

Accidental hypothermia is not new, but it has only recently received attention. Figures collected in Great Britain over the past 25 years suggest that about 10 percent of persons 65 and over are at risk.

A person is especially vulnerable if he or she:

Lives alone or is isolated, without a phone to reach help in case of accident or illness.

Does not shiver or react to cold normally.

Is ill or unable to move around well.

Is taking drugs that keep the body from regulating temperature normally. Such drugs include phenothiazines, which are commonly used to treat anxiety, depression, nausea, and other conditions.

What is hypothermia?

Hypothermia is a condition marked by an abnormally low *internal* body temperature—typically 95°F (35°C) or under. A simple drop in skin temperature is not hypothermia. While hypothermia can sometimes develop slowly, it usually occurs fairly quickly—over a period of a few days.

Hypothermia can be brought on deliberately. For example, in some types of surgery, the patient is chilled to slow breathing, heartbeat, and other body processes. *Accidental* hypothermia, however, may occur in anyone who is exposed to severe cold without enough protection. In addition, some elderly can develop accidental hypothermia after exposure to relatively mild cold.

Who is at risk?

The elderly probably account for nearly half of all victims of accidental hypothermia. Infants are also at risk, as are a few adults between 35 and 64 years old. Immature temperature control is thought to be the reason that infants are at risk. The cause in middle-aged adults is still not fully understood.

Among the elderly, those most likely to develop accidental hypothermia are the chronically ill, the very old, the poor who are unable to afford enough heat, and those who do not take the normal steps to keep warm. The greatest risk is to the relatively small number of aged persons whose temperature regulation is defective. These people do not shiver, and thus cannot produce body heat when they need it.

How many people are affected?

Accurate data on the number of people who die from accidental hypothermia are not available. This lack of information has occurred in part because many doctors are not familiar with the condition, and because its symptoms are like those of many other illnesses. Even an autopsy will not definitely tell if a person died from accidental hypothermia.

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Why do the aged get accidental hypothermia more often than other people?

With advancing age, many people become less able to resist and recover from stresses such as prolonged exposure to cold. The elderly often may not sense that they are becoming cold as readily as younger people, and their bodies may not adjust to changes in temperature as well.

In response to cold, the blood vessels near the surface of the body normally narrow to reduce heat losses. Muscles also begin to tighten to make heat. The result is pale skin and shivering. The reasons why some older people do not respond to cold in a normal way are not yet known.

How can the old protect themselves against accidental hypothermia?

We do not have a strong scientific base on which to set guidelines for temperatures in the homes of the elderly. However, heating the living and sleeping areas of older persons to 65°F (18.3°C) appears adequate in most cases, although people who are sick may need higher

indoor temperatures. (For details, see the next section, "How Are Potential Victims Identified?")

Other measures also should be taken to prevent accidental hypothermia. Dressing warmly during the day, eating enough food, and staying as active as possible are good ways to maintain body heat. Because hypothermia may often start during sleep, special care should be paid to keeping warm in bed by wearing enough clothing and using blankets.

Those older people who are taking medicine to treat anxiety, depression, nervousness, or nausea should ask their doctors whether the medication might affect the control of body temperature.

If possible, older persons should try not to be alone for very long or should ask friends or neighbors to look in on them once or twice a day, particularly in severe cold. In some communities, telephone check-in or personal visit services are available.

How are potential victims identified?

Several signs can aid in identifying possible victims. However, not even a physician can tell exactly how vulnerable a person might be to accidental hypothermia.

HYPOTHERMIA CLUES:

An elderly person may often seem to be unaware of the cold. While others shiver and put on sweaters, an older individual may not shiver and may insist that he or she is comfortable.

Family and friends may notice that a person is not thinking clearly or is not acting as usual.

Various medications may increase the risk of accidental hypothermia. Such drugs include chlorpromazine and other phenothiazines given to treat anxiety, depression, and nausea.

Certain medical conditions may blunt the body's response to cold. These include:

- *disorders of the body's hormone system, especially hypothyroidism ("slow" thyroid);*
- *conditions such as stroke that cause paralysis or reduce awareness;*
- *illnesses such as severe arthritis and Parkinson's disease, which limit activity;*
- *any condition that severely impairs the normal constriction of blood vessels; and*
- *alcoholism.*

A previous bout with accidental hypothermia may be a sign of a lasting problem with temperature regulation.

A person who lives alone and receives few visitors has a greater chance of

lengthy exposure to the cold in case of an accident or illness.

Anything increasing the chances of nighttime accidents—poor vision, difficulty sleeping, confusion, nocturia (frequent urination at night), or incontinence (poor control of bowel movements or urination)—can raise the risk of hypothermia.

Those with low income and little savings often find it difficult to pay high heating bills. But even those who cannot afford large energy bills can dress warmly. In addition, a person can arrange to heat—and stay in—only one or two rooms of the home. And low-income families can get help in paying high energy bills through their state or local community services agency. Institutions such as nursing homes which care for the elderly should be especially careful when lowering temperatures, because patients who are already sick may have particular difficulty producing additional body heat.

Housing without proper insulation from the cold can also increase the risk of accidental hypothermia. However, government-funded weatherization assistance programs in each state help low-income families insulate their homes. Contact your state or local energy office for more information.

How can hypothermia be detected?

Take the individual's temperature. If it is below 95°F (35°C) or does not register on an oral thermometer, repeat using a rectal thermometer for a more accurate reading. If the temperature still does not register or is below 95°F (35°C), get emergency medical help. The only sure way to detect hypothermia is to use a special low-reading thermometer, available in most hospitals, whose scale goes below the usual low point of 94°F (34°C).

If a thermometer is not available, warm your hand on your body (the chest or abdomen is best) and use it to compare the victim's body temperature with your own.

Other signs to look for are:

A change in appearance or behavior during cold weather.

Uncontrollable shivering, lack of shivering, or stiff muscles.

Low indoor temperatures and other signs that the victim has been in an unusually cold room.

Slow—and sometimes irregular—heartbeat; slurred speech; shallow, very slow breathing.

Weak pulse; low blood pressure.

Confusion, disorientation, or drowsiness.

perhaps lapsing into coma. The lower the body temperature, the more likely that the victim will be unconscious. Coma is very probable if the body temperature is 90°F (32.2°C) or under.

Lack of coordination; sluggishness.

Why is accidental hypothermia such a threat if there are so many signs of its presence?

Unfortunately, these signs, other than the drop in body temperature to 95°F (35°C) or below, can be the same as those of a stroke, diabetic coma, heart disease, and other conditions. The victim may not reliably report what is happening, as he or she may not complain of feeling cold.

How is the condition treated?

A victim must be rewarmed, or else he or she will stay chilled. And he or she must be seen by a physician, preferably one familiar with accidental hypothermia and preferably in a hospital setting.

If you suspect that a person has accidental hypothermia, take his or her

temperature as outlined above. If it is below 95°F (35°C), call a doctor or ambulance or take the victim directly to a hospital. If you must wait for emergency medical help to arrive, prevent further heat loss by wrapping the victim in a warm blanket (thermal or electric); using hot water bottles or electric heating pads (preferably on the victim's abdomen, but never on a high setting); and, if the victim is alert, giving him or her small quantities of warm food and drink (but nothing alcoholic!).

If these methods are not available, you can use your own body heat to help keep the victim warm. Lie close to the person, being careful not to handle him or her too roughly. Rubbing the person's limbs, for example, can worsen the condition.

If the victim is unconscious, lower the head and raise the feet to prevent shock and guard against accidental choking.

What are the chances for recovery?

Chances of recovery depend on the severity and length of the exposure to cold, as well as previous general health. If body temperature does not drop below 90°F (32.2°C), chances for a normal recovery are good, barring other complications. If the temperature falls to

between 80°F (26.6°C) and 90°F (32.2°C), most victims will recover but some sort of lasting damage is more likely. If the temperature goes under 80°F (26.6°C), most victims, especially the very old, will not survive.

What are the possible complications?

Hypothermia can worsen pre-existing conditions, such as heart disease and diabetes. Fall of the body's temperature below 90°F (32.2°C) usually causes many complications, because vital organs are damaged or body functions are disrupted. Serious hypothermia often leads to problems with the kidney, liver, and pancreas. The most severe problem during hypothermia and rewarming is a form of irregular heartbeat (ventricular fibrillation) which leads quickly to death if not treated.

What can be done to reduce the threat of accidental hypothermia?

Although we know that continued exposure to even mild cold can be a deadly threat to many elderly, we still do not understand hypothermia itself. We have no sure way to tell who is

susceptible. We do not understand the defects in the body responsible for accidental hypothermia, particularly in victims who appear well protected. We still need to learn the best way to treat accidental hypothermia in the elderly and distribute this information to physicians, nurses, and paramedics.

At present, to protect the old from accidental hypothermia as best as possible, we must teach physicians and emergency medical personnel how to recognize and treat the condition. We also must encourage the elderly themselves to find out if they are at risk and to keep themselves warm in even mildly cold environments. Future advances in our understanding, treatment, and ultimate prevention of accidental hypothermia will derive from scientific research on this condition and on other health problems of the elderly.

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